



FINAL SUMMARY REPORT
G7 Multistakeholder Conference on Artificial Intelligence
December 6, 2018

G7 Multistakeholder Conference on Artificial Intelligence: Final Summary Report

Please note: The discussion papers, conference discussion, and this Final Summary Report do not represent the views of the G7 or its members.

INTRODUCTION

On 6 December 2018, Montréal played host to the G7 Multistakeholder Conference on Artificial Intelligence. This Conference was an outcome of the [2018 G7 Ministerial Meeting on Preparing for the Jobs of the Future](#) and built upon the [G7 Innovation Ministers' Statement on Artificial Intelligence](#). Over 200 experts in artificial intelligence (AI) attended, representing all of the G7 countries and beyond, as well as key multistakeholder perspectives from industry, academia, civil society, and government. In advance of the Conference, consultations were also held in Toronto and Edmonton.

The overarching theme of the Conference was “Enabling the Responsible Adoption of AI”, with breakout sessions focusing on four separate topics:

- AI for Society – *Inclusion in AI Development and Deployment*
- Unleashing Innovation – *Reducing Barriers to Innovation / Enhancing Market Confidence*
- Accountability in AI – *Promoting Greater Societal Trust*
- The Future of Work – *Skills for the Modern Economy*

Several key AI experts and G7 focal point organizations collaboratively drafted discussion papers for each topic and directed breakout sessions during the Conference.

WELCOME AND SETTING THE STAGE

The Conference was opened by Dr. Mona Nemer, Canada’s Chief Science Advisor, who delivered remarks on previous multilateral commitments on AI, Canada’s AI environment, and the importance of grounding AI innovation in the values of diversity, human rights, and inclusiveness.

During the Setting the Stage session moderated by Jean-François Gagné (Element AI), panelists Verity Harding (DeepMind Ethics & Society), Fanny Hidvegi (Access Now), Edward Santow (Australia Human Rights Commission), and Stefan Schnorr (Federal Ministry for Economic Affairs and Energy – Germany) discussed the multidisciplinary nature of AI and the need for a collective multistakeholder response to address the challenges and opportunities with AI. Key perspectives included the protection of human rights in the face of increasing technological capabilities, the role that government plays in encouraging AI and digital infrastructure development, where AI can be used to benefit the general public, and various global strategies on AI.

BREAKOUT SESSIONS AND PLENARY

Attendees divided into separate breakout sessions to further review the discussion papers drafted for the Conference.

AI for Society – *Inclusion in AI Development and Deployment* ([Discussion Paper](#))

Breakout sessions led by: Marie-Josée Hébert (Canada) and Adrian Weller (UK), Plenary lead: Hébert



Participants in this session discussed the importance of inclusion in recognizing the benefits of AI and how the socio-economic benefits from the use of AI can positively impact societies by contributing to value-added outcomes. Topics discussed included:

- The maintenance of a multistakeholder element to ensure that inclusion and diversity are accounted for.
- The potential for algorithms to replicate and reinforce biases, whereby if an individual is not represented in the data, their interests and values will not be present in the end result.
- In developing best practices and standards, solutions should balance universal and specific/cultural values, while including perspectives from different genders and minorities.

Unleashing Innovation – *Reducing Barriers to Innovation / Enhancing Market Confidence* ([Discussion Paper](#))

Breakout sessions led by: Finch Fulton (US) and Lucilla Sioli (EU), Plenary lead: Michael May (Germany)

In this session, participants addressed the balance between innovation and regulation in ensuring competitive and sustainable industries, institutions, and businesses. The following points were made:

- Explainable AI, cyber-security measures, and data quality were viewed as beneficial in fostering AI acceptance, as well as maintaining multistakeholder cooperation.
- Regulations can either speed up or hamper AI development.
- Regulation methods can range from enforced laws to self-regulation standards, but they need to be updated regularly to better reflect the speed of technological change.
- A ‘sandbox’ approach for AI could be adopted to ensure that new innovations are tested before being released.
- Government could play a role in fostering innovation by developing consistent standards and measures that encourage the creation of a favorable environment for development and ensure predictability for both large and small companies.
- Data as a common resource in an innovation environment.

Accountability in AI – *Promoting Greater Societal Trust* ([Discussion Paper](#))

Breakout sessions led by: Jason Millar (Canada), Koichi Hori (Japan), Ian Kerr (Canada), and Kentaro Kotsuki (Japan), Plenary lead: Kerr

AI’s responsible deployment, including consumer protection, standards, and the appropriate level of trust were examined in this session. Key perspectives raised included maintaining the integrity in algorithms and addressing problems, while preventing the unethical development of AI to ensure societal trust in the technologies. Participants raised the following:

- Regulating future developments will be difficult considering AI is not a single technology, and any regulation standard would need to keep in mind existing market and judicial approaches, so one-size-fits-all approach to accountability may be problematic.
- Building and sharing a vocabulary could allow for greater specificity and less generalization in developing standards and accountability measures, keeping in mind the underlying tension between abstract conceptualizations and the practical solutions that practitioners need.



- A values framework needs to be developed alongside innovation in order to create consistent industry standards relating to risk and bias.
- Ensuring greater fairness in AI may require collecting more data from vulnerable groups.
- Since regulating algorithms would be too complex, standards could be tied to outcomes which prevent possible unethical use and development of AI. Further study is required to determine what level of algorithmic ‘explainability’ is optimal for public understanding, while maintaining trust.

The Future of Work – *Skills for the Modern Economy* ([Discussion Paper](#))

Breakout sessions led by: Nicolas Vayatis (France) and Giorgio Metta (Italy), Plenary lead: Metta

During this session, participants discussed the potential of AI to create a large number of jobs across the world, but also to act as a disruptor. Points were raised on the necessity to equip people with education and skills for success in the evolving labour market, while maintaining a multistakeholder role that ensures coordination across numerous fields.

Points of discussion included:

- Education and training programs must be broad, so that the the labour market transition benefits all people, rather than exclusively those with AI expertise/specialization.
- Maintaining a multistakeholder discussion is important, especially as AI developments can affect industries as varied as banking, agriculture, and transportation.
- It is crucial to provide youth with the necessary skills early on in their careers to use, develop, and understand AI. Education is a means to support the demystification of AI and to provide more information on the technology and its uses.

PANEL: WHERE DOES AI GO FROM HERE?

During lunchtime, The Honourable Navdeep Bains, Minister of Innovation, Science and Economic Development moderated a panel with three leading Canadian AI experts, Foteini Agrafioti (Borealis AI), Yoshua Bengio (MILA), and Geoffrey Hinton (Vector Institute), on the current state of AI development and potential future directions. They discussed how, in many fields, the potential benefits of commercializing AI far outweigh the negatives due to the prospect for the personalization of data and large-scale data analysis. While AI has the ability to perform the tedious and low-skilled jobs, at its current level of development, it does not have the ability to perform tasks requiring human creativity, reasoning, and understanding. The panel closed with a discussion on using AI for good and reflecting Canadian values such as human rights and diversity.

PANEL: FROM RESEARCH TO COMMERCIALIZATION

Moderated by James Kurose (National Science Foundation), the final panel of the Conference focused on the process of moving AI from research and development to commercialization from multiple perspectives. Andrew Greenshaw (APEC Digital Hub for Mental Health), Lucilla Sioli (DG CNECT), Geneviève Tanguay (National Research Council of Canada), and Michael Zeller (Software AG) each represented a different stakeholder view on the topic. The panel discussed bridging the gap between research and commercialization, especially with new innovative solutions in fields such as medicine, language interpretation, and manufacturing. The government plays a role in creating an environment for technologies to thrive, bringing together experts, and allocating budgets towards research and testing. The competition for talent is



challenge to address, especially since working for industry can provide a lucrative salary which the public and academic sectors are unable to match. Going forward, maintaining a multistakeholder perspective will be important for AI research and commercialization in order to meet challenges and to sustain growth in multiple fields.

CLOSING REMARKS

The Honourable Navdeep Bains, Minister of Innovation, Science and Economic Development closed the Conference by providing remarks on the challenges and opportunities of AI going forward. He mentioned the importance for industry and government to address unknowns with regards to ethics, security, competition, and safety. He also stated that stakeholders should take a leadership role in fostering an ecosystem that supports responsible AI adoption for the benefit of all. Final thanks were given to all Conference attendees, and those throughout the G7 who collaborated towards the creation of a meaningful multistakeholder event.

For a detailed agenda of the day, please visit: <http://www.ic.gc.ca/eic/site/133.nsf/eng/00001.html>.

For questions regarding the G7 Multistakeholder Conference on Artificial Intelligence, please contact the ISED G7 Secretariat at: ic.isedg7secretariat-secretariatdug7pourisde.ic@canada.ca.

